

## D.4 Stacking of Diacritics

### D.4.1 Circumflex and Tilde

*Code Points Considered:*

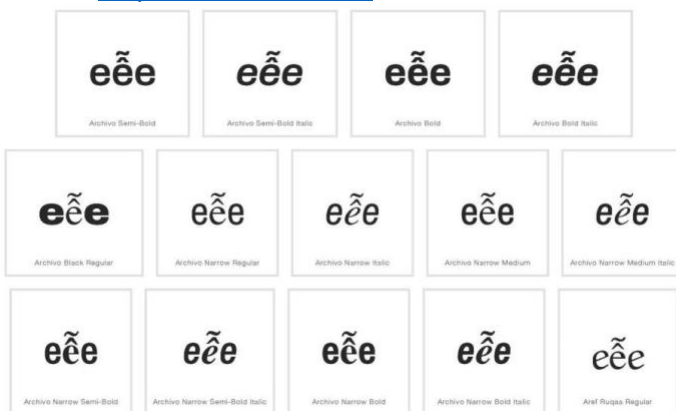
Code Point	Glyph	Unicode Name
00E2	â	LATIN SMALL LETTER A WITH CIRCUMFLEX
00E3	ã	LATIN SMALL LETTER A WITH TILDE
00EA	ê	LATIN SMALL LETTER E WITH CIRCUMFLEX
00EE	î	LATIN SMALL LETTER I WITH CIRCUMFLEX
1EAB	ã̃	LATIN SMALL LETTER A WITH CIRCUMFLEX AND TILDE
00F1	ñ	LATIN SMALL LETTER N WITH TILDE
00F4	ô	LATIN SMALL LETTER O WITH CIRCUMFLEX
00F5	õ	LATIN SMALL LETTER O WITH TILDE
00FB	û	LATIN SMALL LETTER U WITH CIRCUMFLEX
1EC5	ẽ	LATIN SMALL LETTER E WITH CIRCUMFLEX AND TILDE
006F	o	LATIN SMALL LETTER O
1ED7	õ̃	LATIN SMALL LETTER O WITH CIRCUMFLEX AND TILDE
1EF9	ỹ	LATIN SMALL LETTER Y WITH TILDE
011D	ĝ	LATIN SMALL LETTER G WITH CIRCUMFLEX
015D	ŝ	LATIN SMALL LETTER S WITH CIRCUMFLEX
0061	a	LATIN SMALL LETTER A
0065	e	LATIN SMALL LETTER E
0109	ĉ	LATIN SMALL LETTER C WITH CIRCUMFLEX
0125	ĥ	LATIN SMALL LETTER H WITH CIRCUMFLEX
0129	ĩ	LATIN SMALL LETTER I WITH TILDE
0135	ĵ	LATIN SMALL LETTER J WITH CIRCUMFLEX
0169	ũ	LATIN SMALL LETTER U WITH TILDE
0175	ŵ	LATIN SMALL LETTER W WITH CIRCUMFLEX
0177	ŷ	LATIN SMALL LETTER Y WITH CIRCUMFLEX
0067 + 0303	ğ̃	LATIN SMALL LETTER G + COMBINING TILDE
0072 + 0303	ř̃	LATIN SMALL LETTER R WITH COMBINING TILDE
0268 + 0303	ř̃	LATIN SMALL LETTER I WITH STROKE + COMBINING TILDE
0289 + 0303	ũ̃	LATIN SMALL LETTER U BAR + COMBINING TILDE

Sequence aǎa (0061 1EAB 0061) compared using Google Fonts in <https://wordmark.it/>:



*Findings:*

Stacking diacritics are always in place. Sequence eěe (0065 1EC5 0065) compared using Google Fonts in <https://wordmark.it/>:



*Findings:*

Stacking diacritics are always in place.

Sequence o͞o (006F 1EC5 006F) compared using Google Fonts in <https://wordmark.it/>:



#### Findings:

Stacking diacritics are always in place

#### D.4.2 Circumflex and Hook Above

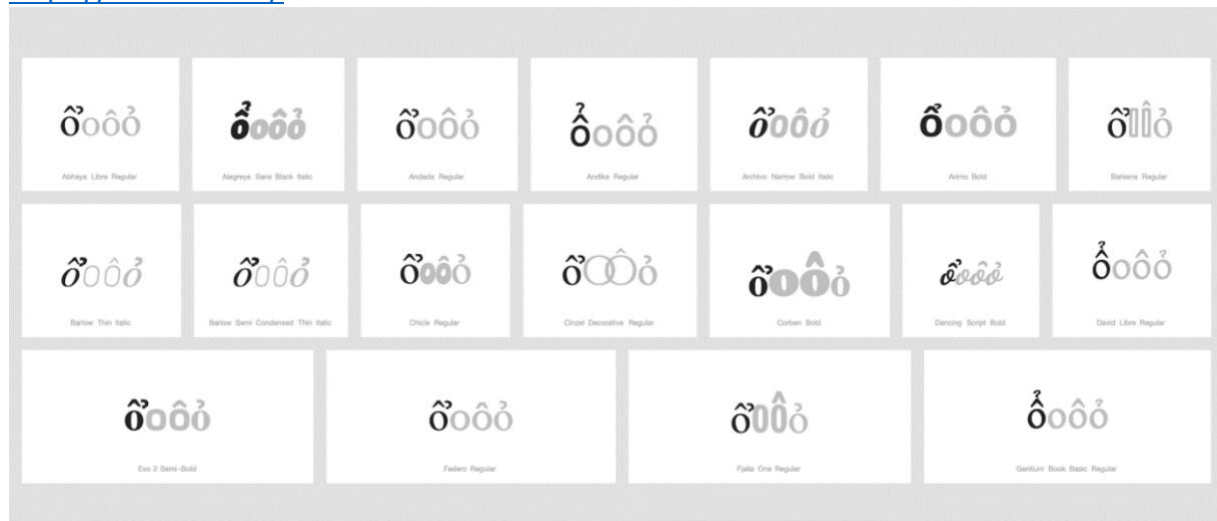
##### Code Points Considered:

Code Point	Glyph	Unicode Name
1EA9	ă	LATIN SMALL LETTER A WITH CIRCUMFLEX AND HOOK ABOVE
00E2	â	LATIN SMALL LETTER A WITH CIRCUMFLEX
1EA3	ȃ	LATIN SMALL LETTER A WITH HOOK ABOVE
1EC3	ẽ	LATIN SMALL LETTER E WITH CIRCUMFLEX AND HOOK ABOVE
00EA	ê	LATIN SMALL LETTER E WITH CIRCUMFLEX
1EBB	ȅ	LATIN SMALL LETTER E WITH HOOK ABOVE
1ED5	ố	LATIN SMALL LETTER O WITH CIRCUMFLEX AND HOOK ABOVE
00F4	ô	LATIN SMALL LETTER O WITH CIRCUMFLEX
1ECF	ơ	LATIN SMALL LETTER O WITH HOOK ABOVE

ââââ	ââââ	ââââ	ââââ	ââââ	ââââ	ââââ
Alia Regular	Alia Regular	Alia Angular Regular	Alia Regular	Alia Bold	Alia Regular	Alia Slant Regular
ââââ	ââââ	ââââ	ââââ	ââââ	ââââ	ââââ
Alia Regular	Almastra Regular	Almastra Tall	Almastra Bold	Almastra Bold Italic	Almastra Regular	Almastra Tall
ââââ	ââââ	ââââ	ââââ	ââââ	ââââ	ââââ
Amasteth Regular	Amasteth Bold Italic	Amasteth Regular	Amia Regular	Amia Semi-Bold	Amia Bold	Amia Regular
ââââ	ââââ	ââââ	ââââ	ââââ	ââââ	ââââ
Amiri Tally	Amiri Bold	Amiri Bold Italic	Amira Regular	Amira Bold	Amirah Regular	Amira Regular
ââââ	ââââ	ââââ	ââââ	ââââ	ââââ	ââââ
Angler Regular	Annie Use Your Telescope Regular	Anonymus Pro Regular	Anonymus Pro Italic	Anonymus Pro Bold	Antic Regular	Antic Oldsw Regular
ââââ	ââââ	ââââ	ââââ	ââââ	ââââ	ââââ
Antic Slab Regular	Antic Regular	Antip Regular	Antip Tally	Anticus Slab Regular	Anticosti Daughter Regular	Anticus Regular
ââââ	ââââ	ââââ	ââââ	ââââ	ââââ	ââââ
Antiky Regular	Arco Regular	Arya Regular	Aria Bold	Arvic Age Regular	Audience Regular	Arthur One Regular
ââââ	ââââ	ââââ	ââââ	ââââ	ââââ	ââââ
Barone Regular	Barrow Thin	Cabin Bold	Cabin Bold Italic	Cabin Slashed Regular	Cabin Slashed Bold	Cabin Extra Bold

[illegible]

Sequence ốồồồ (1ED5 + 006F + 00F4 + 1ECF) compared using Google Fonts in <https://wordmark.it/>:



#### Findings:

In a large number of fonts, the two letters are consistently different. However, in a significant number of fonts, renderings are very diverse. In some case the hook as secondary modifier is placed vertically above, in others it is set horizontally next to the circumflex as primary modifier, in some fonts it is spaced so far horizontally to the right that it becomes unclear if it is a modifier belonging to the first or the second code point, and yet in other cases it even overlaps with the glyph of the following code point.

#### Conclusion:

Multiple diacritics were generally well-rendered and there was no case of the diacritic completely shifting to the following letter and creating confusion. In addition, these are used in Vietnamese language where the language users can distinguish these code points. Therefore, it was concluded that these code points are not variants.

### D.4.3 Breve + Grave above

#### Code Points Considered:

Code Point	Glyph	Unicode Name
1EB1	ă	LATIN SMALL LETTER A WITH BREVE AND GRAVE

Sequence aǎa (0061 1EB1 0061) compared using Google Fonts in <https://wordmark.it/> :



#### Findings:

Stacking diacritics are in place in most cases. One font namely Noto Sans HK has an error in design, or there are some errors in wordmark.it software: on the screen diacritics are not positioned properly, in .png downloaded from wordmark.it diacritics are positioned properly, in .pdf presentation of the same web page diacritics are not positioned properly

#### Conclusion:

Stacking diacritics are almost always in place.

### D.4.4 Breve and Hook Above

#### Code Points Considered:

Code Point	Glyph	Unicode Name
1EA3	ǎ	LATIN SMALL LETTER A WITH HOOK ABOVE
1EB3	ǣ	LATIN SMALL LETTER A WITH BREVE AND HOOK ABOVE
0061	a	LATIN SMALL LETTER A
0103	ă	LATIN SMALL LETTER A WITH BREVE

အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ
Arabic Regular	Arabic Condensed Regular	Arabic Semi Bold Italic	Arabic Condensed Regular	Arabic Semi Bold Light Italic	Arabic Semi Bold Italic	Arabic Condensed Extra Light	Arabic Regular
အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ
Bengali Regular	Catalan Bold	Chakma Regular	Cherry Swash Bold	Cherry Condensed Italic	Cherry Pro Semi Bold	Cherry Extra Bold	Economica Regular
အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ
Das 2 Extra Bold	Fix Code Regular	Fix Code Bold	Garibi Heavy Regular	Hebrew Bold Italic	Hi Fat French Canon Regular	Latin Bold	Latin Tenor Regular
အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ	အိအိအိအိ
Malayalam Thin Bold	Myanmar Display Bold Italic	Real cap Text Bold	Romany Light Italic	Romany Light	Sanskrit Bold Italic	Sanskrit Semi Pro Light	Sanskrit Semi Pro Light Bold

Code Point	Glyph	Unicode Name
1EB5	ă	LATIN SMALL LETTER A WITH BREVE AND TILDE

				
Amebysa Regular	Amebysa Regular	Amebysa Semi-Bold	Amebysa Bold	Amebysa Regular
				
Amebysa Italic	Amebysa Bold	Amebysa Bold Italic	Amebysa Regular	Amebysa Bold
				
Amebysa Regular	Amebysa Regular	Amebysa Regular	Amebysa Regular	Amebysa Regular

The double diacritics stay at the base character and thus will not be confused with characters next to it having just one of the diacritics.

## D.4.6 Horn and Acute

### Code Points Considered:

Code Point	Glyph	Unicode Name
1EDB	ó	LATIN SMALL LETTER O WITH HORN AND ACUTE
1EE9	ú	LATIN SMALL LETTER U WITH HORN AND ACUTE

Sequence ó (1EDB) compared using Google Fonts in <https://wordmark.it/>:

ó	ó	ó	ó	ó	ó	ó
Batang	BatangChe	Browalla New	BrowallaUPC	Calibri	Calibri Light	Cardina
ó	ó	ó	ó	ó	ó	ó
Cardina Math	Cardina	Comic Sans MS	Comixote	Constantia	Corbel	Corby New
ó	ó	ó	ó	ó	ó	ó
CorbiuUPC	Counter	Counter New	DaumPenh	David	DFONa-GB	DilleniaUPC
ó	ó	ó	ó	ó	ó	ó
DokChampa	Dokum	DokumChe	Edmon	Exchanges Edezza	ExmanuUPC	Euphemia
ó	ó	ó	ó	ó	ó	ó
FangSong	Franklin Gothic Medium	Franshuett	FranshuUPC	Gabonisa	Gaudens	Georgia

Sequence ú (1EE9) compared using Google Fonts in <https://wordmark.it/>:

ú	ú	ú	ú	ú	ú	
Akhaya Libre Bold	Akhaya Libre Extra-Bold	Akhaya Pathana Regular	Akhaya Regular	Akhaya Regular	Akhaya Regular	
ú	ú	ú	ú	ú	ú	
Akhaya Regular	Advent Pro Thin	Advent Pro Extra Light	Advent Pro Light	Advent Pro Regular	Advent Pro Medium	
ú	ú	ú	ú	ú	ú	
Advent Pro Semi-Bold	Advent Pro Bold	Aguafina Script Regular	Alexandria Regular	Alexis Regular	Alexis Regular	
ú	ú	ú	ú	ú	ú	
Alexis Regular	Alexis Regular	Alexis Regular	Alexis Bold	Alegreya Regular	Alegreya Sans	Alegreya Medium
ú	ú	ú	ú	ú	ú	
Alegreya Medium Italic	Alegreya Bold	Alegreya Bold Italic	Alegreya Extra-Bold	Alegreya Extra-Bold Italic	Alegreya Black	

### Findings:

Diacritics are rendered in a consistent manner.



## D.4.7 Horn and Hook Above

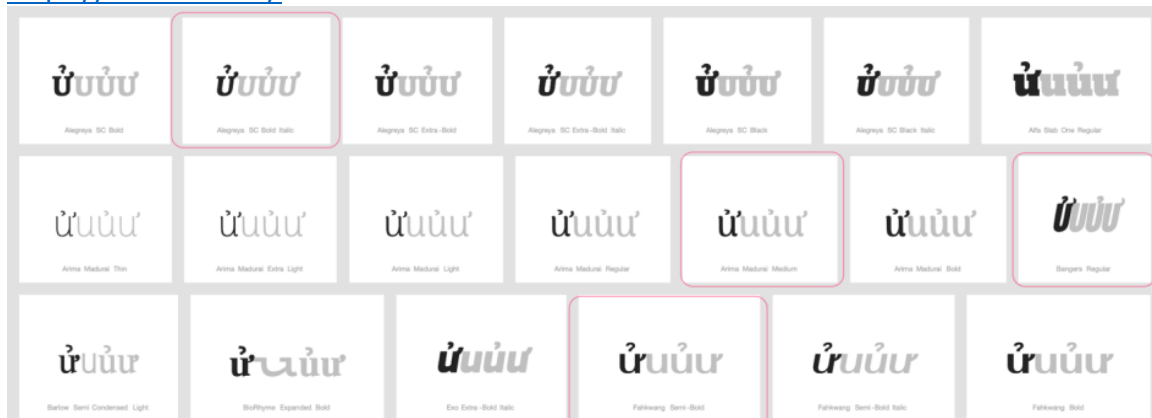
Code Points Considered:

Code Point	Glyph	Unicode Name
1EDF	Ǿ	LATIN SMALL LETTER O WITH HORN AND HOOK ABOVE
1ECF	ǿ	LATIN SMALL LETTER O WITH HOOK ABOVE
01A1	ơ	LATIN SMALL LETTER O WITH HORN
1EED	ủ	LATIN SMALL LETTER U WITH HORN AND HOOK ABOVE
1EE7	ủ	LATIN SMALL LETTER U WITH HOOK ABOVE
01B0	ư	LATIN SMALL LETTER U WITH HORN

Sequence ǿơǿơ (1EDF + 006F + 1ECF + 01A1) compared using Google Fonts in <https://wordmark.it/>:



Sequence ửửửử (1EED + 0075+ 1EE7+ 01B0) compared using Google Fonts in <https://wordmark.it/>:





#### Additional Findings:

In some fonts, it remains unclear whether the right-hand side hook of 1EED belongs to that glyph or the code point following to the right. Given however two facts, namely that no code point exists in with a left-hand modifier similar enough, and that these Code Points are used only in a minority of language communities, the readers of which should be attuned to such differences, this would not seem to cross the threshold to constitute a variant. It may however be advisable to pay attention to these inconsistencies in a string-similarity review before admission to the root zone.

#### Conclusions:

These code points are not variants.

### D.4.8 Diacritic Grave

#### Code Points Considered:

Code Point	Glyph	Unicode Name
0061	a	LATIN SMALL LETTER A
0065	e	LATIN SMALL LETTER E
0069	i	LATIN SMALL LETTER I
006F	o	LATIN SMALL LETTER E
0075	u	LATIN SMALL LETTER U
0079	y	LATIN SMALL LETTER Y
00E0	à	LATIN SMALL LETTER A WITH GRAVE
00E8	è	LATIN SMALL LETTER E WITH GRAVE
00EC	ì	LATIN SMALL LETTER I WITH GRAVE
00F2	ò	LATIN SMALL LETTER O WITH GRAVE
00F9	ù	LATIN SMALL LETTER U WITH GRAVE
1EF3	ỳ	LATIN SMALL LETTER Y WITH GRAVE

Sequence ààa, èèè, ììì, òòò, ùùù, and ỳỳỳ (0061 00E0 0061, 0065 00E8 0065, 0069 00EC 0069, 006F 00F2 006F, 0075 00F9 0075, and 0079 1EF3 0079 ) compared using Google Fonts in <https://wordmark.it/>:





### Findings:

Diacritics are always in place.

## D.4.9 Diacritics Horn And Grave

### Code Points Considered:

Code Point	Glyph	Unicode Name
006F	o	LATIN SMALL LETTER E
0075	u	LATIN SMALL LETTER U
00F2	ò	LATIN SMALL LETTER O WITH GRAVE
00F9	ù	LATIN SMALL LETTER U WITH GRAVE
01A1	ơ	LATIN SMALL LETTER O WITH HORN
01B0	ư	LATIN SMALL LETTER U WITH HORN
1EDD	ờ	LATIN SMALL LETTER O WITH HORN AND GRAVE
1EEB	ừ	LATIN SMALL LETTER U WITH HORN AND GRAVE

Sequence ờơơờ and ừừừừ (1EDD 006F 01A1 00F2 and 1EEB 0075 01B0 00F9) compared using Google Fonts in <https://wordmark.it/>:

ờơơờ ừừừừ <i>Alegreya SC Regular</i>	ờơơờ ừừừừ <i>Alegreya SC Italic</i>	ờơơờ ừừừừ <i>Alegreya SC Medium</i>	ờờờờ ừừừừ <i>Alegreya SC Bold</i>	ờờờờ ừừừừ <i>Alegreya SC Bold Italic</i>
ờờờờ ừừừừ <i>Alegreya SC Extra-Bold</i>	ờờờờ ừừừừ <i>Alegreya SC Extra-Bold Italic</i>	ờờờờ ừừừừ <i>Bevan Regular</i>	ờờờờ ừừừừ <i>Content Regular</i>	ờờờờ ừừừừ <i>Content Bold</i>
ờờờờ ừừừừ <i>Cormorant Garamond Italic</i>	ờờờờ ừừừừ <i>Cormorant Garamond Medium Italic</i>	ờờờờ ừừừừ <i>Cuprum Regular</i>	ờờờờ ừừừừ <i>EB Garamond Medium Italic</i>	ờờờờ ừừừừ <i>EB Garamond Semi-Bold</i>



## D.4.11 Circumflex + Dot Below

Code Points Considered:

Code Point	Glyph	Unicode Name
0061	a	LATIN SMALL LETTER A
006F	o	LATIN SMALL LETTER O
00E2	â	LATIN SMALL LETTER A WITH CIRCUMFLEX
00F4	ô	LATIN SMALL LETTER O WITH CIRCUMFLEX
1EA1	ạ	LATIN SMALL LETTER A WITH DOT BELOW
1EAD	ậ	LATIN SMALL LETTER A WITH CIRCUMFLEX AND DOT BELOW
1ECD	ơ	LATIN SMALL LETTER O WITH DOT BELOW
1ED9	ộ	LATIN SMALL LETTER O WITH CIRCUMFLEX AND DOT BELOW















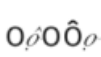



















Sequence *ạậầầạ* (0061 1EAD 0061 00E2 1EA1) compared using Google Fonts in <https://wordmark.it/>:





Sequence *ođođođođ* (006F 1ED9 006F 00F4 1ECD) compared using Google Fonts in <https://wordmark.it/>:



 Asst Regular	 Aetoch Regular	 Atma Light	 B&B2 Bold Italic
 Bahiara Regular	 Bai Janjune Italic	 Barlow Black Italic	 Barlow Semi Condensed Thin Italic
 Barrio Regular	 Bighat One Regular	 Bibo Swash Caps Regular	 Bryant Extra Light
 Blinker Bold	 Boogaloo Regular	 Bungee Hairline Regular	 Bungee Inline Regular
 Bungee Outline Regular	 Carbo Italic	 Carnis Gothic Regular	 Carnis Gothic SC Regular
 Caval Regular	 Charmman Regular	 Chathura Light	 Chivo Italic
 Chivo Black Italic	 Condiment Regular	 Comman SC Semi-Bold	 Crafty Girls Regular
 Crimson Pro Extra Light Italic	 Darker Grottesque Semi-Bold	 Dawning of a New Day Regular	 Dosis Extra-Bold
 Dr Sugiyama Regular	 Encode Sans Semi Condensed Light	 Geostar Regular	 Gothic A1 Extra Light
 IBM Plex Mono Medium	 Jalisk Regular	 Kauthon Script Regular	 League Script Regular





*Conclusions:*

#### D.4.12 Breve + Dot Below

Code Point	Glyph	Unicode Name
0061	a	LATIN SMALL LETTER A
0103	ă	LATIN SMALL LETTER A WITH BREVE
1EA1	ạ	LATIN SMALL LETTER A WITH DOT BELOW
1EB7	ḁ	LATIN SMALL LETTER A WITH BREVE AND DOT BELOW

<https://wordmark.it/>:



### Findings:

The double diacritics stay at the base character and thus will not be confused with characters next to it having just one of the diacritics.

#### D.4.13 Dot below and combining acute accent

##### Code Points Considered:

Code Point	Glyph	Unicode Name
0065	e	LATIN SMALL LETTER E
006F	o	LATIN SMALL LETTER O
00E9	é	LATIN SMALL LETTER E WITH ACUTE
00F3	ó	LATIN SMALL LETTER O WITH ACUTE
1EB9	ẹ	LATIN SMALL LETTER E WITH DOT BELOW
1EB9 + 0301	ẹ́	LATIN SMALL LETTER E WITH DOT BELOW + COMBINING ACUTE ACCENT
1ECD	ọ	LATIN SMALL LETTER O WITH DOT BELOW
1ECD + 0301	ọ́	LATIN SMALL LETTER O WITH DOT BELOW + COMBINING ACUTE ACCENT

Sequence (ẹẹẹ and ọọọ) (U+0065 U+1EAB+0301 U+0065 and U+006F U+1ECD+0301 U+006f) compared using Google Fonts in <https://wordmark.it/> :

<b>ẹẹẹ ọọọ</b> Alegreya Extra-Bold Italic	ẹẹẹ ọọọ Antic Slab Regular	ẹẹẹ ọọọ Assistant Regular	ẹẹẹ ọọọ Battambang Regular	ẹẹẹ ọọọ Cantarell Regular	ẹẹẹ ọọọ Cardo Italic
ẹẹẹ ọọọ Dosis Medium	ẹẹẹ ọọọ Fasthand Regular	ẹẹẹ ọọọ GFS Neohellenic Italic	ẹẹẹ ọọọ IM Fell Great Primer Regular	ẹẹẹ ọọọ IM Fell Great Primer Italic	ẹẹẹ ọọọ Kameron Regular
ẹẹẹ ọọọ Milonga Regular	ẹẹẹ ọọọ PT Sans Italic	ẹẹẹ ọọọ Radley Regular	<b>ẹẹẹ ọọọ</b> Rajdhani Bold	ẹẹẹ ọọọ Roboto Regular	ẹẹẹ ọọọ Signika Light
ẹẹẹ ọọọ Simonetta Italic	ẹẹẹ ọọọ Spectral Italic	ẹẹẹ ọọọ Tinos Italic	ẹẹẹ ọọọ Ubuntu Mono Italic	ẹẹẹ ọọọ Volkorn Semi-Bold Italic	ẹẹẹ ọọọ Zilla Slab Light Italic

### Conclusions:

Stacking diacritics are always in place.

## D.4.14 Circumflex + Acute Above

Code Points Considered:

Code Point	Glyph	Unicode Name
0061	a	LATIN SMALL LETTER A
0065	e	LATIN SMALL LETTER E
006F	o	LATIN SMALL LETTER O
00E1	á	LATIN SMALL LETTER A WITH ACUTE
00E2	â	LATIN SMALL LETTER A WITH CIRCUMFLEX
00E9	é	LATIN SMALL LETTER E WITH ACUTE
00EA	ê	LATIN SMALL LETTER E WITH CIRCUMFLEX
00F3	ó	LATIN SMALL LETTER O WITH ACUTE
00F4	ô	LATIN SMALL LETTER O WITH CIRCUMFLEX
1EA5	ǎ	LATIN SMALL LETTER A WITH CIRCUMFLEX AND ACUTE
1EBF	ě	LATIN SMALL LETTER E WITH CIRCUMFLEX AND ACUTE
1ED1	ǔ	LATIN SMALL LETTER O WITH CIRCUMFLEX AND ACUTE

Sequence ǎǎǎ (1EA5 0061 00E2 00E1) compared using Google Fonts in <https://wordmark.it/>:

••• ǎǎǎ Assistant Regular	ǎǎǎ Assistant Semi-Bold	ǎǎǎ Assistant Bold	ǎǎǎ Assistant Extra-Bold	ǎǎǎ Ailloch Regular	ǎǎǎ Ailloch Bold	ǎǎǎ Aul Regular	ǎǎǎ Aul Bold
ǎǎǎ Alibi Extra Light	ǎǎǎ Alibi Light	ǎǎǎ Alibi Regular	ǎǎǎ Alibi Medium	ǎǎǎ Alibi Semi-Bold	ǎǎǎ Alibi Bold	ǎǎǎ Alma Light	ǎǎǎ Alma Regular
ǎǎǎ Alma Medium	ǎǎǎ Alma Semi-Bold	ǎǎǎ Alma Bold	ǎǎǎ Atomic Age Regular	ǎǎǎ Aubrey Regular	ǎǎǎ Audiowide Regular	ǎǎǎ Autour One Regular	ǎǎǎ Average Regular
ǎǎǎ Averaga Sans Regular	ǎǎǎ Averaga Groussa Libre Regular	ǎǎǎ Averaga Libre Light	ǎǎǎ Averaga Libre Light Italic	ǎǎǎ Averaga Libre Regular	ǎǎǎ Averaga Libre Italic	ǎǎǎ Averaga Libre Bold	ǎǎǎ Averaga Libre Bold Italic
ǎǎǎ Averaga Sans Libre Light	ǎǎǎ Averaga Sans Libre Light Italic	ǎǎǎ Averaga Sans Libre Regular	ǎǎǎ Averaga Sans Libre Italic	ǎǎǎ Averaga Sans Libre Bold	ǎǎǎ Averaga Sans Libre Bold Italic	ǎǎǎ Averaga Serif Libre Light	ǎǎǎ Averaga Serif Libre Light Italic
ǎǎǎ Averaga Serif Libre Regular	ǎǎǎ Averaga Serif Libre Italic	ǎǎǎ Averaga Serif Libre Bold	ǎǎǎ Averaga Serif Libre Bold Italic	ǎǎǎ B612 Regular	ǎǎǎ B612 Italic	ǎǎǎ B612 Bold	ǎǎǎ B612 Bold Italic

Sequence éêêé (1EBF 0065 00EA 00E9) compared using Google Fonts in <https://wordmark.it/>:

éêêé Archivo Italic	éêêé Archivo Medium	éêêé Archivo Medium Italic	éêêé Archivo Semi-Bold	éêêé Archivo Semi-Bold Italic	éêêé Archivo Bold	éêêé Archivo Bold Italic	éêêé Archivo Black Regular
éêêé Archivo Narrow Regular	éêêé Archivo Narrow Italic	éêêé Archivo Narrow Medium	éêêé Archivo Narrow Medium Italic	éêêé Archivo Narrow Semi-Bold	éêêé Archivo Narrow Semi-Bold Italic	éêêé Archivo Narrow Bold	éêêé Archivo Narrow Bold Italic
éêêé Aref Rugaa Regular	éêêé Aref Rugaa Bold	éêêé Arma Madurai Thin	éêêé Arma Madurai Extra Light	éêêé Arma Madurai Light	éêêé Arma Madurai Regular	éêêé Arma Madurai Medium	éêêé Arma Madurai Bold
éêêé Arma Madurai Extra-Bold	éêêé Arma Madurai Black	éêêé Armo Regular	éêêé Armo Italic	éêêé Armo Bold	éêêé Armo Bold Italic	éêêé Armonia Regular	éêêé Armonia Regular
éêêé Arsenal Regular	éêêé Arsenal Italic	éêêé Arsenal Bold	éêêé Arsenal Bold Italic	éêêé Artika Regular	éêêé Arvo Regular	éêêé Arvo Italic	éêêé Arvo Bold
éêêé Arvo Bold Italic	éêêé Arya Regular	éêêé Arya Bold	éêêé Asap Regular	éêêé Asap Italic	éêêé Asap Medium	éêêé Asap Medium Italic	éêêé Asap Semi-Bold

Sequence ôôôô (1ED1 006F 00F4 00F3) compared using Google Fonts in <https://wordmark.it/>:

ôôôô Alegreya Sans Bold	ôôôô Alegreya Sans Bold Italic	ôôôô Alegreya Sans Extra-Bold	ôôôô Alegreya Sans Extra-Bold Italic	ôôôô Alegreya Sans Black	ôôôô Alegreya Sans Black Italic	ôôôô Alegreya Sans SC Thin	ôôôô Alegreya Sans SC Thin Italic
ôôôô Alegreya Sans SC Light	ôôôô Alegreya Sans SC Light Italic	ôôôô Alegreya Sans SC Regular	ôôôô Alegreya Sans SC Italic	ôôôô Alegreya Sans SC Medium	ôôôô Alegreya Sans SC Medium Italic	ôôôô Alegreya Sans SC Bold	ôôôô Alegreya Sans SC Bold Italic
ôôôô Alegreya Sans SC Extra-Bold	ôôôô Alegreya Sans SC Extra-Bold Italic	ôôôô Alegreya Sans SC Black	ôôôô Alegreya Sans SC Black Italic	ôôôô Aleo Light	ôôôô Aleo Light Italic	ôôôô Aleo Regular	ôôôô Aleo Italic
ôôôô Aleo Bold	ôôôô Aleo Bold Italic	ôôôô Aleo Brush Regular	ôôôô Alfa Slab One Regular	ôôôô Aleo Regular	ôôôô Aleo Regular	ôôôô Aleo Angular Regular	ôôôô Alfon Regular
ôôôô Allan Bold	ôôôô Allerta Regular	ôôôô Allerta Stencil Regular	ôôôô Allura Regular	ôôôô Almaral Light	ôôôô Almaral Regular	ôôôô Almaral Bold	ôôôô Almaral Extra-Bold
ôôôô Almendra Regular	ôôôô Almendra Italic	ôôôô Almendra Bold	ôôôô Almendra Bold Italic	ôôôô Almendra Display Regular	ôôôô Almendra SC Regular	ôôôô Amarante Regular	ôôôô Amaranth Regular

*Findings:*

Diacritics are rendered in a consistent manner, but in some fonts circumflex and acute together can be confused with a Tilde.

*Conclusions:*

These code points are not variants.

#### D.4.15 Acute (vs. Non-Acute)

*Code Points Considered:*

Code Point	Glyph	Unicode Name
00E1	á	LATIN SMALL LETTER A WITH ACUTE
00E9	é	LATIN SMALL LETTER E WITH ACUTE
00ED	í	LATIN SMALL LETTER I WITH ACUTE
00F3	ó	LATIN SMALL LETTER O WITH ACUTE
00FA	ú	LATIN SMALL LETTER U WITH ACUTE
00FD	ý	LATIN SMALL LETTER Y WITH ACUTE
0107	ć	LATIN SMALL LETTER C WITH ACUTE
013A	ĺ	LATIN SMALL LETTER L WITH ACUTE
0144	ñ	LATIN SMALL LETTER N WITH ACUTE
0155	ř	LATIN SMALL LETTER R WITH ACUTE
015B	ś	LATIN SMALL LETTER S WITH ACUTE
017A	ž	LATIN SMALL LETTER Z WITH ACUTE
0061	a	LATIN SMALL LETTER A
0065	e	LATIN SMALL LETTER E
0069	i	LATIN SMALL LETTER I
006F	o	LATIN SMALL LETTER O
0075	u	LATIN SMALL LETTER U
0079	y	LATIN SMALL LETTER Y
0063	c	LATIN SMALL LETTER C
006C	l	LATIN SMALL LETTER L
006E	n	LATIN SMALL LETTER N
0072	r	LATIN SMALL LETTER R
0073	s	LATIN SMALL LETTER S
007A	z	LATIN SMALL LETTER Z

Sequence (aáčceéiíllńń) (0061 00E1 0063 0107 0065 00E9 0069 00ED 006C 013A) compared using Google Fonts in <https://wordmark.it/>:

<b>aáčceéiíllńń</b> Abhaya Libre Bold	aáčceéiíllńń Alegreya Sans Thin	aáčceéiíllńń Bai Jamjuree Light	<b>aáčceéiíllńń</b> Capriola Regular	
<b><i>aáčceéiíllńń</i></b> Crimson Pro Extra-Bold Italic	aáčceéiíllńń Dosis Light	<b>aáčceéiíllńń</b> El Messiri Semi-Bold	aáčceéiíllńń Fahkwang Extra Light	
<b>aáčceéiíllńń</b> Gelasio Medium	<b>aáčceéiíllńń</b> Hammersmith One Regular	<b>aáčceéiíllńń</b> IBM Plex Mono Medium	aáčceéiíllńń Jomolhari Regular	
<b><i>aáčceéiíllńń</i></b> Karla Italic	aáčceéiíllńń Lekton Regular	<b>aáčceéiíllńń</b> Macondo Swash Caps Regular	aáčceéiíllńń Nokora Regular	
<b><i>aáčceéiíllńń</i></b> Open Sans Italic	<b><i>aáčceéiíllńń</i></b> PT Sans Italic	<b>aáčceéiíllńń</b> Quicksand Semi-Bold	<i>aáčceéiíllńń</i> Raleway Thin Italic	
<b>aáčceéiíllńń</b> Saira Condensed Semi-Bold	<b>aáčceéiíllńń</b> Tauri Regular	<b>aáčceéiíllńń</b> Teko Medium	<b><i>aáčceéiíllńń</i></b> Ubuntu Medium Italic	<b><i>aáčceéiíllńń</i></b> Volkmor Bold Italic
<b>aáčceéiíllńń</b> Work Sans Medium				

String (ńńóórrssuűyyźź) compared using Google Fonts in <https://wordmark.it/>:

<b>ńńóórrssuűyyźź</b> Abhaya Libre Bold	<b>ńńóórrssuűyyźź</b> Arbutus Regular	ńńóórrssuűyyźź B612 Regular	
ńńóórrssuűyyźź Cabin Regular	<b>ńńóórrssuűyyźź</b> Crete Round Italic	ńńóórrssuűyyźź Dosis Extra Light	ńńóórrssuűyyźź Exo 2 Thin
ńńóórrssuűyyźź Fira Code Regular	ńńóórrssuűyyźź Galeano Regular	ńńóórrssuűyyźź Hepta Slab Extra Light	
<i>ńńóórrssuűyyźź</i> IBM Plex Serif Light Italic	ńńóórrssuűyyźź Jura Bold	ńńóórrssuűyyźź Lekton Bold	

nñoórrřssuùyyźź	nñoórrřssuùyyźź	nñoórrřssuùyyźź	nñoórrřssuùyyźź
Mali Semi-Bold	Muli Light Italic	Nanum Pen Script Regular	Oleo Script Bold
nñoórrřssuùyyźź	nñoórrřssuùyyźź	nñoórrřssuùyyźź	nñoórrřssuùyyźź
PT Serif Italic	Quicksand Regular	Roboto Bold	Saira Condensed Regular
nñoórrřssuùyyźź	nñoórrřssuùyyźź	nñoórrřssuùyyźź	
Taviraj Regular	Ubuntu Regular	Volkorn Bold Italic	
nñoórrřssuùyyźź			
Zilla Slab Light Italic			

*Findings:*  
Acute is always in place.

*Conclusions:*  
No variants candidates found.

#### D.4.16 Circumflex Above + Grave Above

*Code Points Considered:*

Code Point	Glyph	Unicode Name
00E2	â	LATIN SMALL LETTER A WITH CIRCUMFLEX
00EA	ê	LATIN SMALL LETTER E WITH CIRCUMFLEX
00E0	à	LATIN SMALL LETTER A WITH GRAVE
00E8	è	LATIN SMALL LETTER E WITH GRAVE
00F4	ô	LATIN SMALL LETTER O WITH CIRCUMFLEX
00F2	ò	LATIN SMALL LETTER O WITH GRAVE
1EC1	ě	LATIN SMALL LETTER E WITH CIRCUMFLEX AND GRAVE
1ED3	ǒ	LATIN SMALL LETTER O WITH CIRCUMFLEX AND GRAVE
006F	o	LATIN SMALL LETTER O
1EA7	ǎ	LATIN SMALL LETTER A WITH CIRCUMFLEX AND GRAVE
0061	a	LATIN SMALL LETTER A
0065	e	LATIN SMALL LETTER E

Sequence aǎǎǎ (0061 1EA7 0061 00E0 00E2) compared using Google Fonts in <https://wordmark.it/>:

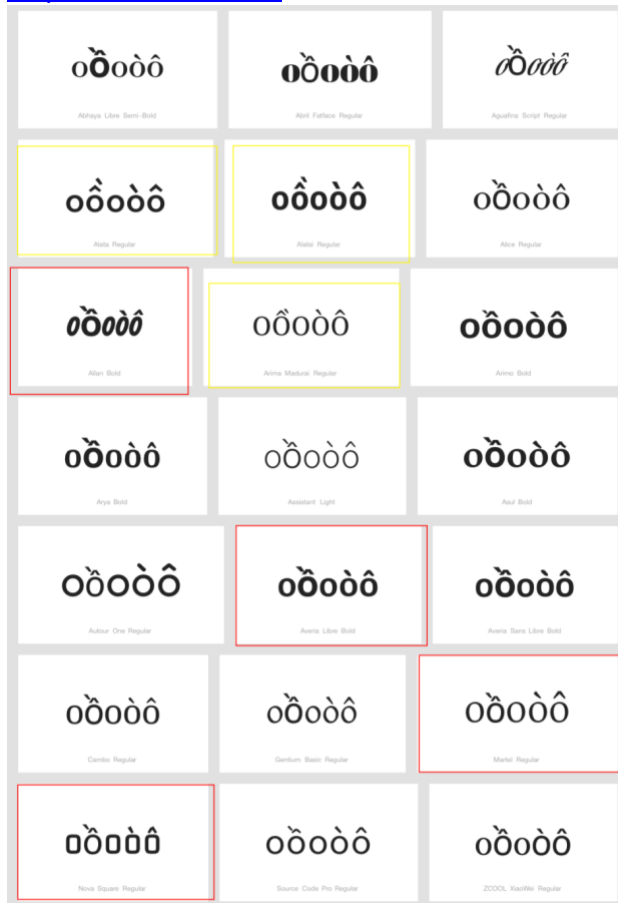
aǎǎǎ	aǎǎǎ	<i>aǎǎǎ</i>
Atropa Libre Sans Bold	Atropa Libre Regular	Atropa Libre Regular
aǎǎǎ	aǎǎǎ	aǎǎǎ
Atropa Regular	Atropa Regular	Atropa Regular
<b>aǎǎǎ</b>	aǎǎǎ	aǎǎǎ
Atropa Bold	Atropa Medium Regular	Atropa Bold
aǎǎǎ	aǎǎǎ	aǎǎǎ
Atropa Bold	Atropa Light	Atropa Bold
aǎǎǎ	aǎǎǎ	aǎǎǎ
Atropa One Regular	Atropa Libre Bold	Atropa Sans Libre Bold
aǎǎǎ	aǎǎǎ	aǎǎǎ
Cardinal Regular	Cardinal Sans Regular	Merri Regular
aǎǎǎ	aǎǎǎ	aǎǎǎ
Nova Square Regular	Source Code Pro Regular	ICONS, Variable Regular

Sequence eǎǎǎ (0065 1EC1 0065 00EA 00E8) compared using Google Fonts in <https://wordmark.it/>:

eǎǎǎ	eǎǎǎ	<i>eǎǎǎ</i>
Atropa Libre Sans Bold	Atropa Libre Regular	Atropa Libre Regular
eǎǎǎ	eǎǎǎ	eǎǎǎ
Atropa Regular	Atropa Regular	Atropa Regular
<b>eǎǎǎ</b>	eǎǎǎ	eǎǎǎ
Atropa Bold	Atropa Medium Regular	Atropa Bold
eǎǎǎ	eǎǎǎ	eǎǎǎ
Atropa Bold	Atropa Light	Atropa Bold
eǎǎǎ	eǎǎǎ	eǎǎǎ
Atropa One Regular	Atropa Libre Bold	Atropa Sans Libre Bold
eǎǎǎ	eǎǎǎ	eǎǎǎ
Cardinal Regular	Cardinal Sans Regular	Merri Regular
eǎǎǎ	eǎǎǎ	eǎǎǎ
Nova Square Regular	Source Code Pro Regular	ICONS, Variable Regular



Sequence 00000 (006F 1ED3 006F 00F4 00F2) compared using Google Fonts in <https://wordmark.it/>:



### Findings:

There is no stability in the way the grave is positioned. In few fonts it occurs above the circumflex, in a minority of fonts it occurs displaced to the right, here highlighted in yellow. In a significant minority of fonts, the grave occurs instead misplaced to the left of the basic letter shape, and in all such cases presented here (but particularly in the case of a with circumflex and grave) the unmodified basic letter shape followed by the same with circumflex and grave may appear to carry the grave. Accordingly, there is a specific risk for confusion by Latin script users of a, e, or o followed by the same with circumflex and grave with a sequence of the same, first with a grave then with circumflex on top.

### Conclusions:

Multiple diacritics were generally well-rendered and there was no case of the diacritic completely shifting to the following letter and creating confusion. In addition, these are used in Vietnamese language where the language users can distinguish these code points. Therefore, it was concluded that these code points are not variants.

## D.4.17 Breve and Acute Above

Code Points Considered:

Code Point	Glyph	Unicode Name
1EAF	ǎ	LATIN SMALL LETTER A WITH BREVE AND ACUTE
00E1	á	LATIN SMALL LETTER A WITH ACUTE
0103	ă	LATIN SMALL LETTER A WITH BREVE
0061	a	LATIN SMALL LETTER A

Sequence ǎǎǎ (1EAF 0061 0103 00E1) compared using Google Fonts in <https://wordmark.it/>:

ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ
ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ
ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ
ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ
ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ
ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ
ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ
ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ
ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ	ǎǎǎ

Findings:

In some fonts, the Acute diacritic is displaced to the right. However, it does not appear to be above the following glyph, but standing alone.

Conclusions:

There should not be significant confusion with other glyphs.

## D.4.18 Tilde and Horn (Above)

Code Points Considered:

Code Point	Glyph	Unicode Name
1EEF	ũ	LATIN SMALL LETTER U WITH HORN AND TILDE
00F5	õ	LATIN SMALL LETTER O WITH TILDE
01A1	ơ	LATIN SMALL LETTER O WITH HORN
01B0	ư	LATIN SMALL LETTER U WITH HORN
1EE1	ö	LATIN SMALL LETTER O WITH HORN AND TILDE

006F	o	LATIN SMALL LETTER O
0075	u	LATIN SMALL LETTER U
0169	ũ	LATIN SMALL LETTER U WITH TILDE

Sequence ơơơ (1EE1 006F 00F5 01A1) compared using Google Fonts in <https://wordmark.it/>:

••• ơơơ AbeeZee Regular	ơơơ AbeeZee Italic	ơơơ Abel Regular	ơơơ Abhaya Libre Regular	ơơơ Abhaya Libre Medium	ơơơ Abhaya Libre Semi-Bold	ơơơ Abhaya Libre Bold	ơơơ Abhaya Libre Extra-Bold
ơơơ Abril Fatasa Regular	ơơơ Adlonica Regular	ơơơ Acme Regular	ơơơ Actor Regular	ơơơ Adamina Regular	ơơơ Advent Pro Thin	ơơơ Advent Pro Extra Light	ơơơ Advent Pro Light
ơơơ Advent Pro Regular	ơơơ Advent Pro Medium	ơơơ Advent Pro Semi-Bold	ơơơ Advent Pro Bold	ơơơ Aguafina Script Regular	ơơơ Alecrom Regular	ơơơ Aladin Regular	ơơơ Alata Regular
ơơơ Alata Regular	ơơơ Alarich Regular	ơơơ Alaf Regular	ơơơ Alaf Bold	ơơơ Alegreya Regular	ơơơ Alegreya Italic	ơơơ Alegreya Medium	ơơơ Alegreya Medium Italic
ơơơ Alegreya Bold	ơơơ Alegreya Bold Italic	ơơơ Alegreya Extra-Bold	ơơơ Alegreya Extra-Bold Italic	ơơơ Alegreya Black	ơơơ Alegreya Black Italic	ơơơ Alegreya SC Regular	ơơơ Alegreya SC Italic
ơơơ Alegreya SC Medium	ơơơ Alegreya SC Medium Italic	ơơơ Alegreya SC Bold	ơơơ Alegreya SC Bold Italic	ơơơ Alegreya SC Extra-Bold	ơơơ Alegreya SC Extra-Bold Italic	ơơơ Alegreya SC Black	ơơơ Alegreya SC Black Italic

Sequence ưưư (1EEF 0075 0169 01B0) compared using Google Fonts in <https://wordmark.it/>:

ưưư AbeeZee Regular	ưưư AbeeZee Italic	ưưư Abel Regular	ưưư Abhaya Libre Regular	ưưư Abhaya Libre Medium	ưưư Abhaya Libre Semi-Bold	ưưư Abhaya Libre Bold	ưưư Abhaya Libre Extra-Bold
ưưư Abril Fatasa Regular	ưưư Adlonica Regular	ưưư Acme Regular	ưưư Actor Regular	ưưư Adamina Regular	ưưư Advent Pro Thin	ưưư Advent Pro Extra Light	ưưư Advent Pro Light
ưưư Advent Pro Regular	ưưư Advent Pro Medium	ưưư Advent Pro Semi-Bold	ưưư Advent Pro Bold	ưưư Aguafina Script Regular	ưưư Alecrom Regular	ưưư Aladin Regular	ưưư Alata Regular
ưưư Alata Regular	ưưư Alarich Regular	ưưư Alaf Regular	ưưư Alaf Bold	ưưư Alegreya Regular	ưưư Alegreya Italic	ưưư Alegreya Medium	ưưư Alegreya Medium Italic
ưưư Alegreya Bold	ưưư Alegreya Bold Italic	ưưư Alegreya Extra-Bold	ưưư Alegreya Extra-Bold Italic	ưưư Alegreya Black	ưưư Alegreya Black Italic	ưưư Alegreya SC Regular	ưưư Alegreya SC Italic
ưưư Alegreya SC Medium	ưưư Alegreya SC Medium Italic	ưưư Alegreya SC Bold	ưưư Alegreya SC Bold Italic	ưưư Alegreya SC Extra-Bold	ưưư Alegreya SC Extra-Bold Italic	ưưư Alegreya SC Black	ưưư Alegreya SC Black Italic

*Findings:*

Diacritics are rendered in a consistent manner

*Conclusions:*

According to the findings, these code points are not variants.

#### D.4.19 Dot Below + Combining Grave Accent

*Code Points Considered:*

Code Point	Glyph	Unicode Name
0065	e	LATIN SMALL LETTER E
006F	o	LATIN SMALL LETTER O
00E8	è	LATIN SMALL LETTER E WITH GRAVE
00F2	ò	LATIN SMALL LETTER O WITH GRAVE
1EB9	ẹ	LATIN SMALL LETTER E WITH DOT BELOW
1EB9 + 0300	ẹ̀	LATIN SMALL LETTER E WITH DOT ABOVE + COMBINING GRAVE ACCENT
1ECD	ọ	LATIN SMALL LETTER O WITH DOT BELOW
1ECD + 0300	ọ̀	LATIN SMALL LETTER O WITH DOT BELOW + COMBINING GRAVE ACCENT

Sequence ẹ̀ọ̀ẹ̀ (1ECD + 0300 006F 00F2 1ECD) compared using Google Fonts in <https://wordmark.it/>:

òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò
Abril Fatface Regular	Adonica Regular	Acme Regular	Actor Regular	Adamina Regular	Advent Pro Thin	Advent Pro Extra Light	Advent Pro Light
òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò
Advent Pro Regular	Advent Pro Medium	Advent Pro Semi-Bold	Advent Pro Bold	Aguafina Script Regular	Akronim Regular	Aladin Regular	Alata Regular
òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò
Alatal Regular	Aldrich Regular	Alief Regular	Alief Bold	Alegreya Regular	Alegreya Italic	Alegreya Medium	Alegreya Medium Italic
òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò
Alegreya Bold	Alegreya Bold Italic	Alegreya Extra-Bold	Alegreya Extra-Bold Italic	Alegreya Black	Alegreya Black Italic	Alegreya SC Regular	Alegreya SC Italic
òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò
Alegreya SC Medium	Alegreya SC Medium Italic	Alegreya SC Bold	Alegreya SC Bold Italic	Alegreya SC Extra-Bold	Alegreya SC Extra-Bold Italic	Alegreya SC Black	Alegreya SC Black Italic
òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò	òòòò

Sequence èèèè (1EB9 + 0300 0065 00E8 1EB9) compared using Google Fonts in <https://wordmark.it/>:

èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè
Alegreya Sans Bold Italic	Alegreya Sans Extra-Bold	Alegreya Sans Extra-Bold Italic	Alegreya Sans Black	Alegreya Sans Black Italic	Alegreya Sans SC Thin	Alegreya Sans SC Thin Italic	Alegreya Sans SC Light
èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè
Alegreya Sans SC Light Italic	Alegreya Sans SC Regular	Alegreya Sans SC Italic	Alegreya Sans SC Medium	Alegreya Sans SC Medium Italic	Alegreya Sans SC Bold	Alegreya Sans SC Bold Italic	Alegreya Sans SC Extra-Bold
èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè
Alegreya Sans SC Extra-Bold Italic	Alegreya Sans SC Black	Alegreya Sans SC Black Italic	Aleo Light	Aleo Light Italic	Aleo Regular	Aleo Italic	Aleo Bold
èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè
Aleo Bold Italic	Alex Brush Regular	Alta Slab One Regular	Alisa Regular	Alisa Regular	Alisa Angular Regular	Alisan Regular	Alisan Bold
èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè
Altera Regular	Altera Stencil Regular	Allura Regular	Almarai Light	Almarai Regular	Almarai Bold	Almarai Extra-Bold	Almendra Regular
èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè	èèèè

### Findings:

Diacritics are rendered in a consistent manner

*Conclusions:*

According to the findings, these code points are not variants.

D.4.20 Horn and Dot Below

*Code Points Considered:*

Code Point	Glyph	Unicode Name
006F	o	Latin Small Letter O
0075	u	Latin Small Letter U
01A1	ø	Latin Small Letter O with Horn
01B0	u̯	Latin Small Letter U with Horn
1ECD	ọ	Latin Small Letter O with Dot Below
1EE3	ø̣	Latin Small Letter O with Horn and Dot Below
1EE5	ụ	Latin Small Letter U with Dot Below
1EF1	u̯̣	Latin Small Letter U with Horn and Dot Below

Sequence ọøøø̣ (006F 1EE3 006F 1ECD 01A1) compared using Google Fonts in <https://wordmark.it/>:

<p>oŕoŕoŕ</p> <p>Abhaya Libre Semi-Bold</p>	<p>oŕoŕoŕ</p> <p>Abril Fatface Regular</p>	<p>oŕoŕoŕ</p> <p>Aquafina Script Regular</p>
<p>oŕoŕoŕ</p> <p>Alata Regular</p>	<p>oŕoŕoŕ</p> <p>Alatsi Regular</p>	<p>oŕoŕoŕ</p> <p>Alice Regular</p>
<p>oŕoŕoŕ</p> <p>Allen Bold</p>	<p>oŕoŕoŕ</p> <p>Arima Madurai Regular</p>	<p>oŕoŕoŕ</p> <p>Arimo Bold</p>
<p>oŕoŕoŕ</p> <p>Arya Bold</p>	<p>oŕoŕoŕ</p> <p>Assistant Light</p>	<p>oŕoŕoŕ</p> <p>Asul Bold</p>
<p>oŕoŕoŕ</p> <p>Autor One Regular</p>	<p>oŕoŕoŕ</p> <p>Averia Libre Bold</p>	<p>oŕoŕoŕ</p> <p>Averia Sans Libre Bold</p>
<p>oŕoŕoŕ</p> <p>Cambo Regular</p>	<p>oŕoŕoŕ</p> <p>Fahkwang Semi-Bold</p>	<p>oŕoŕoŕ</p> <p>Gentium Basic Regular</p>
<p>oŕoŕoŕ</p> <p>Martel Regular</p>	<p>oŕoŕoŕ</p> <p>Nova Square Regular</p>	<p>oŕoŕoŕ</p> <p>Source Code Pro Regular</p>
<p>oŕoŕoŕ</p> <p>ZCOOL XiaoWei Regular</p>		

Sequence uŕuŕuŕ (0075 1EF1 0075 1EE5 01B0) compared using Google Fonts in <https://wordmark.it/>:

<p>បុរេបុរេ</p> <p>Abhaya Libre Semi-Bold</p>	<p>បុរេបុរេ</p> <p>Abril Fatface Regular</p>	<p>អុរអុរ</p> <p>Aguafina Script Regular</p>
<p>បុរេបុរេ</p> <p>Alata Regular</p>	<p>បុរេបុរេ</p> <p>Alatal Regular</p>	<p>បុរេបុរេ</p> <p>Alice Regular</p>
<p>អុរអុរ</p> <p>Allan Bold</p>	<p>បុរេបុរេ</p> <p>Arma Madurai Regular</p>	<p>បុរេបុរេ</p> <p>Armo Bold</p>
<p>បុរេបុរេ</p> <p>Arya Bold</p>	<p>បុរេបុរេ</p> <p>Assistant Light</p>	<p>បុរេបុរេ</p> <p>Azul Bold</p>
<p>បុរេបុរេ</p> <p>Autour One Regular</p>	<p>បុរេបុរេ</p> <p>Averia Libre Bold</p>	<p>បុរេបុរេ</p> <p>Averia Sans Libre Bold</p>
<p>បុរេបុរេ</p> <p>Cambo Regular</p>	<p>បុរេបុរេ</p> <p>Cormorant Garamond Bold Italic</p>	<p>បុរេបុរេ</p> <p>Cormorant Upright Bold</p>
<p>បុរេបុរេ</p> <p>Crete Round Italic</p>	<p>បុរេបុរេ</p> <p>Dancing Script Semi-Bold</p>	<p>បុរេបុរេ</p> <p>Fahkwang Semi-Bold</p>
<p>បុរេបុរេ</p> <p>Gentium Basic Regular</p>	<p>បុរេបុរេ</p> <p>Martel Regular</p>	<p>បុរេបុរេ</p> <p>Nova Square Regular</p>
<p>បុរេបុរេ</p> <p>Source Code Pro Regular</p>	<p>បុរេបុរេ</p> <p>ZCOOL XiaoWei Regular</p>	

Findings:



In rare cases, it is not clear if the horn is a righthand-side modifier of the second character or a left-hand-side modifier of the third character. However, there is no character with a left-hand-side modifier in the repertoire. Therefore this does not pose a security risk.

*Conclusions:*

No variant relationship is warranted.

#### D.4.21 Stacking in Courier New (And Perhaps Other Fonts)

We have seen that, with precomposed Code Points, there is no stacking problem. However, when we have not had a precomposed Code Points available, we have necessarily used combining diacritics. Then, the situation changes. In particular, when using the Courier New font (which is one of our three standard fonts for analysis), there is sometimes a problem. Sometimes, the combining mark simply gets its own space, with the following letter shifter right to make room – which is irritating, but not confusing. However, in other cases the combining mark appears to be associated with the following letter.

*Code Points Considered:*

Code Point	Glyph	Unicode Name
1EB9 + 0301	é	Latin Small Letter E with Dot Below + Combining Acute Accent
1EB9 + 0300	è	Latin Small Letter E with Dot Below + Combining Grave Accent
0067 + 0303	ğ	Latin Small Letter G + Combining Tilde
0268 + 0303	ĩ	Latin Small Letter I with Stroke + Combining Tilde
1ECD + 0300	ò	Latin Small Letter O with Dot Below + Combining Grave Accent
1ECD + 0301	ó	Latin Small Letter O with Dot Below + Combining Acute Accent
025B + 0331 + 0308	ë	Latin Small Letter Open E + Combining Diaeresis + Combining Macron Below
025B + 0331	ē	Latin Small Letter Open E + Combining Macron Below
0254 + 0331	ō	Latin Small Letter Open O + Combining Macron Below
0072 + 0303	ř	Latin Small Letter R + Combining Tilde
0289 + 0303	ũ	Latin Small Letter U with Bar + Combining Tilde

In each case below, the letter is followed by another letter (or two, in the case of two combining marks. (In each case shown, the letters were simply copied, then the font changed.)

Ariel Courier New

āa	a_a	Latin Small Letter A + Combining Macron Below
ēe	e_e	Latin Small Letter E + Combining Macron Below
ġg	g_~g <=	Latin Small Letter G + Combining Tilde
īi	i_i	Latin Small Letter I + Combining Macron Below
ḿm	m_m	Latin Small Letter M + Combining Cedilla
ñn	n_n	Latin Small Letter N + Combining Dieresis
ōo	o_o	Latin Small Letter O + Combining Cedilla
ōo	o_o	Latin Small Letter O + Combining Macron Below
řr	r_~r <=	Latin Small Letter R + Combining Tilde
öo	o_o	Latin Small Letter Open O + Combining Dieresis
ōo	o_o <=	Latin Small Letter Open O + Combining Macron Below
ëe	e_e	Latin Small Letter Open E + Combining Dieresis
ēe	e_e <=	Latin Small Letter Open E + Combining Macron Below
ëee	e_e ee <=	Latin Small Letter Open E + Combining Dieresis + Combining Macron Below **
īi	i_i <=	Latin Small Letter I with Stroke + Combining Tilde
ūu	u_u <=	Latin Small Letter U with Bar + Combining Tilde
èe	e_e <=	Latin Small Letter E with Dot Below + Combining Grave Accent
éé	e_e <=	Latin Small Letter E with Dot Below + Combining Acute Accent
òo	o_o <=	Latin Small Letter O with Dot Below + Combining Grave Accent
óo	o_o <=	Latin Small Letter O with Dot Below + Combining Acute Accent
ôo	o_o	Latin Small Letter O with Circumflex + Combining Dot Below
ôo	o_o	Latin Small Letter O with Dot Below + Combining Circumflex
õo	o_o	Latin Small Letter O with Horn + Combining Dot Below
õo	o_o	Latin Small Letter O with Dot Below + Combining Horn **

#### Findings:

With each of these cases, error is a certainty. The ideal solution, of course, would be for the Unicode Consortium to create new pre-composed Code Points for these problem cases. But the Unicode Consortium does not plan on creating any new codepoints.

#### Conclusions:

This problem exists as the bug in the font. They are not variants.

## D.4.22 Circumflex and Acute vs Tilde

Code Points Considered:

Code Point	Glyph	Unicode Name
1EA5	ǎ	LATIN SMALL LETTER A WITH CIRCUMFLEX AND ACUTE
1EBF	ě	LATIN SMALL LETTER E WITH CIRCUMFLEX AND ACUTE
1ED1	ǝ	LATIN SMALL LETTER O WITH CIRCUMFLEX AND ACUTE
00E3	ã	LATIN SMALL LETTER A WITH TILDE
00F1	ñ	LATIN SMALL LETTER N WITH TILDE
00F5	õ	LATIN SMALL LETTER O WITH TILDE
0129	ĩ	LATIN SMALL LETTER I WITH TILDE
0169	ũ	LATIN SMALL LETTER U WITH TILDE

Comparing 1EA5 00E3 ǎǎ

ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ
Comic Sans MS	Copperplate	Copperplate-Bold	Copperplate-Light	Corvia Hebrew	Courier	Courier New	Courier-Bold	Courier-BoldOblique	Courier-Oblique
ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ
CourierNewPS-BoldItalicMT	CourierNewPS-BoldMT	CourierNewPS-ItalicMT	CourierNewPSMT	DecoType Nashi	Devanagari MT	Devanagari Sangam MN	DevanagariSangamMN	DevanagariSangamMN-Bold	
ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ
Didot	Didot-Bold	Didot-Italic	DIN Alternate	DIN Condensed	Diwan Kufi	Diwan Thuluth	DiwanMushafi	Euphemia UCAS	EuphemiaUCAS
ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ	ǎǎ
EuphemiaUCAS-Italic	Farah	Farsi	Futura	Futura-CondensedExtraBold	Futura-CondensedMedium	Futura-Medium	Futura-MediumItalic	Geneva	Georgia

Comparing 1ED1 00F5 ǝǝ

ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ
Cochin-Italic	Comic Sans MS	Copperplate	Copperplate-Bold	Copperplate-Light	Corvia Hebrew	Courier	Courier New	Courier-Bold	Courier-BoldOblique
ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ
Courier-Oblique	CourierNewPS-BoldItalicMT	CourierNewPS-BoldMT	CourierNewPS-ItalicMT	CourierNewPSMT	DecoType Nashi	Devanagari MT	Devanagari Sangam MN	DevanagariSangamMN	
ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ
DevanagariSangamMN-Bold	Didot	Didot-Bold	Didot-Italic	DIN Alternate	DIN Condensed	Diwan Kufi	Diwan Thuluth	DiwanMushafi	Euphemia UCAS
ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ	ǝǝ
EuphemiaUCAS	EuphemiaUCAS-Bold	EuphemiaUCAS-Italic	Farah	Farsi	Futura	Futura-CondensedExtraBold	Futura-CondensedMedium	Futura-Medium	

*Findings:*

These are distinguishable.

*Conclusions:*

No variant relationship is warranted.